DEPARTMENT OF PESTICIDE REGULATION
PESTICIDE REGISTRATION AND EVALUATION COMMITTEE
Meeting Minutes – January 16, 2009

Committee Members/Alternates in Attendance:

Syed Ali, State Water Resources Control Board (SWRCB)
Lynn Baker, Air Resources Board (ARB)
Anna Fan, Office of Environmental Health Hazard Assessment (OEHHA)
Kathleen Groody, Integrated Waste Management Board (IWMB)
Martha Harnly, Department of Public Health (DPH)
Stella McMillin, Department of Fish and Game (DFG)
Jodi Pontureri, State Water Resources Control Board (SWRCB)
Ann Prichard, Department of Pesticide Regulation (DPR)
Rebecca Sisco, University of California, IR-4 Program
Patti L. TenBrook, U.S. Environmental Protection Agency, Region 9 (U.S. EPA)
Dave Whitmer, California Agriculture Commissioners and Sealers Association

Visitors in Attendance:

Brian Bret, Dow Agro Sciences
Larry Coltharp, Scotts Miracle Gro
Nasser Dean, Western Plant Health Association
George Farnsworth, DPR
Roberta Firoved, California Rice Commission
Johnny Gonzalez, SWRCB
Paul Hann, Central Valley Regional Water Quality Control Board (CVRWQCB)
Amy Her, DPR
Greg Hyatt, Interagency Ecological Program
Victoria Hornbaker, California Department of Food and Agriculture
Artie Lawyer, Technology Sciences Group
Jamie Lu, CVRWQCB
Eileen Mahoney, DPR
Jeanne Martin, DPR
Danny McClure, CVRWQCB
Doug Okumura, Lawson & Associates
Amanda Palumbo, UC Davis
Margie Read, CVRWQCB
Denise Webster, DPR
Jim Wells, Environmental Solutions Group, LLC
Donald Weston, UC Berkeley

1. Introductions and Committee Business – Ann Prichard, Chairperson, DPR

a. About 21 people attended the meeting.
b. No corrections to the minutes of the previous meeting held on November 21, 2008, were identified.

2. Pyrethroid Residues in Urban Creeks – Donald Westin, UC

Pyrethroid pesticides residues are known to be in the sediments of urban creeks, but until recently there was no information on the urban runoff which presumably has provided the source of these pyrethroids. Sampling of runoff from residential neighborhoods in six Bay-area and Central Valley communities have shown pyrethroids present in nearly every sample, in most cases around 10-20 ng/L but reaching as high as 100 ng/L. Work with the amphipod *Hyalella azteca* has shown its 96 hr EC50 for most pyrethroids to be about 2-5 ng/L, depending on the compound. Therefore, in nearly all runoff samples tested, the pyrethroid concentration has exceeded this threshold, and toxicity has been observed. The pyrethroids bifenthrin, cypermethrin, and cyfluthrin seem to be most often responsible, with occasional contribution from lambda-cyhalothrin. Toxicity Identification Evaluation procedures have provided results consistent with pyrethroids as the cause of the *Hyalella* toxicity in all of the urban runoff samples that have been tested with these procedures.

3. Status of Chlorpyrifos and Diazinon Reevaluations – Denise Webster, DPR

History:
The first diazinon product was registered with the United States Environmental Protection Agency (U.S. EPA) in 1956. Similarly, chlorpyrifos was first registered nearly 10 years later. They are both organophosphate pesticides that affect the functioning of the nervous system of insects. Both compounds are used on a variety of agricultural crops and turf for the control of various insects. There are other uses of diazinon such as pest control on livestock.

In February of 2003, DPR placed all diazinon agricultural use products - labeled for use as dormant sprays - into reevaluation. A little over a year later, all agricultural use chlorpyrifos products were placed into reevaluation. This was based on water quality monitoring data collected by various state and regional agencies showing exceedances of water quality criteria for aquatic invertebrates in California Rivers and tributaries. Water Quality Criteria is a benchmark indicating the potential for biological effects within that water body. Developed by either U.S. EPA or California's State Water Resources Control Board, exceedances of the water quality criteria enter into a weight of evidence that a

particular water body is impaired whereby the State Water Resources will work with the Regional Boards to implement a 303(d) listing in order to restore it back to health.

For diazinon, the monitoring data gathered in the Sacramento and San Joaquin Valleys had exceedances more frequently during the dormant spray season. For chlorpyrifos, there was no seasonality associated with the exceedances reported. The focus of the reevaluation for chlorpyrifos was in the San Joaquin Valley, the Sacramento/San Joaquin Delta, and Monterey County.

Mitigation Measures Timeline:
DIAZINON
California specific supplemental labeling was developed by chemical manufacturers and approved by DPR scientists to mitigate off-site movement. The label mitigation includes:

- Restrictions of application to ground equipment only,
- Prohibiting application within 100 feet upslope of "sensitive aquatic sites," and,
- Prohibiting application to orchards when soil moisture is at field capacity, or when a storm event is likely.

The supplemental labeling appears on all California registered dormant spray products.

In December 2004, U.S. EPA prohibits sales of outdoor consumer products. In addition, DPR develops regulations in August 2006, called "Dormant Insecticide Contamination Prevention" to help mitigate water quality concerns.

CHLORPYRIFOS
Mitigation measures for chlorpyrifos were developed through U.S. EPA's Interim Reregistration Eligibility Decision for Chlorpyrifos. Part of the mitigation was a phase out of specific uses – which the registrants agreed to. U.S. EPA was concerned about uses of chlorpyrifos and required label changes to mitigate worker and ecological risks to food and drinking water. Mitigation included:

- Eliminating virtually all homeowner uses,
- Greater worker protection,
- Required buffer zones,
- Placed restrictions in application rates, and
- Increased the time between applications.

This label mitigation currently exists on all chlorpyrifos containing products registered in California.

As part of both reevaluations, DPR required monitoring to determine whether or not the label mitigation measures are successful in reducing water quality exceedances.

Monitoring Data Current and Pending:

DIAZINON

In 2004, the registrant submitted study protocols for four studies. However, due to inclement weather, they were unable to perform the studies. In 2006, DPR received the final reports which investigated the Smart Sprayer technology and inward spraying at edge of field as additional measures to reduce dormant OP runoff. In early 2007, DPR received a report prepared by University of California Davis which provided results of a monitoring study of pesticides in California's Central Valley Waterways. This study indicated that diazinon concentrations measured during the 2006 dormant spray season were still exceeding water quality criteria. DPR forwarded that study to the registrant and asked them to address the exceedances. In May of 2007, the registrant responded to DPR's request for additional mitigation by proposing to find the source of these exceedances and work with the existing grower groups to correct the problem. In February 2008, DPR responded to the registrant and determined that recent monitoring data needs to be evaluated to determine the relationship between diazinon use and exceedances of the water quality criteria. In July and October 2008, DPR received the survey of existing monitoring data. This included the Sacramento and Feather River Watersheds and the San Joaquin Watershed. DPR anticipates providing a review of this data and reporting back to the registrant in the second quarter of 2009.

CHLORPYRIFOS

In February 2007, a monitoring proposal was submitted to DPR by the registrants that included monitoring in the Delta and San Joaquin watersheds. In addition, the registrant proposed to investigate how chlorpyrifos is getting into surface waters by investigating application methods and use patterns, and develop best management practices. In April of 2008, DPR received a final report entitled, "Surface Water Monitoring and Use Investigations for Determining Effectiveness of Chlorpyrifos Mitigation Measures – 2007 Final Report." In June of 2008, DPR scientists reviewed the report and determined that the monitoring data indicate that chlorpyrifos continues to be detected at levels that exceed water quality objectives at most sites considered in the report. As a result of this final report, DPR required the registrant conduct an additional study to determine if concentrations of chlorpyrifos in surface water are decreasing. This survey will consist of monitoring sites from the entire Central Valley and Central Coast. DPR anticipates receiving the final report of monitoring by the second quarter of 2009.

4. <u>Air Monitoring Network</u> – Randy Segawa, DPR

Postponed until the next PREC meeting in March.

5. Possible Herbicide Involvement in Fish Kills - Stella McMillin, DFG

In October 2008, there was a fish kill of about 5,000 fish in Alameda Creek (in Alameda County). The incident took place close to a freeway soon after a storm. The dissolved oxygen at the site was very low (less than 0.5 ppm). Water samples were analyzed for pesticides. Several pesticides were detected but at concentrations unlikely to have an impact on fish. Diuron, however, was present in concentrations likely to be toxic to algae (1 ppm). One explanation for the incident is that diuron was responsible for an algae die-off that caused the dissolved oxygen to drop and the fish to die. Diuron is used widely on rights-of-way. DFG is interested in further monitoring of diuron and other herbicides to see if they are having indirect impacts on fish populations.

6. Agenda items for next meeting - Ann Prichard, DPR

Syed Ali requested an update on the diazinon reevaluation upon DPR's review of the registrants submission of all relevant recent statewide surface water monitoring data.

Due to the Governor's executive order, the date for the March meeting is still to be determined.

7. **Adjourn**